## **PROCEEDINGS**

OF THE

## BIOLOGICAL SOCIETY OF WASHINGTON

A NEW MUSKRAT FROM ARIZONA

BY E. A. GOLDMAN.

Since "A Systematic Synopsis of the Muskrats" by Hollister (North Amer. Fauna, No. 32, 47 pp., Apr. 29, 1911) was published collections have been made along the lower course of the Colorado River, which reveal the existence in that region of a geographic race unknown to the reviser of the group. Specimens have been taken at various localities, and as *Ondatra zibethica pallida* the animal has been recorded by Grinnell (Univ. Calif. Pub. Zool., vol. 12, no. 4, p. 238, Mar. 20, 1914) from Palo Verde and Pilot Knob, California. A fine series, however, of nineteen in winter pelage from four miles south of Gadsden, extreme southwestern Arizona, recently taken by Bernard Bailey has afforded the most satisfactory basis for comparison.

The new subspecies may be known as follows:

## Ondatra zibethica bernardi, subsp. nov.

COLORADO RIVER MUSKRAT.

Type.—From four miles south of Gadsden, Yuma County, Arizona. No. 250454, ♂ adult, U. S. National Museum (Biological Survey collection, collected by Bernard Bailey, November 12, 1931. Original No. A4372; X catalogue No. 27010.

Distribution.—Lower Colorado River Valley in southwestern Arizona, southeastern California, northeastern Lower California, and doubtless northwestern Sonora.

General characters.—A rather small pale subspecies. Most closely allied to Ondatra zibethica pallida, of central Arizona, but less dusky, more cinnamon and therefore lighter in general coloration; face less blackish; rump near sides of tail without distinct light buffy patches usually present in pallida; cranial characters distinctive. Similar in color to O. z. mergens of Nevada, but decidedly smaller and differing in cranial details.

Color.—Type (fresh winter pelage): Upper parts nearly uniform cinnamon or rusty reddish, the back thinly lined or slightly obscured by darker overlying hairs; muzzle pale pinkish buff; middle of face from nose to level of eyes buffy grayish mixed with black; under parts in general overlaid with pale cinnamon, merging imperceptibly with color of sides, becoming pale pinkish buffy on throat, inner sides of limbs and inguinal region; a narrow, elongated brownish median spot on chin as usual in the group; feet clothed with the usual short brownish hairs and brownish or dull grayish fringing bristles; tail dark brownish.

Skull.—Similar in size to that of O. z. pallida, but nasals longer and narrower anteriorly; anterior border of outer wall of antorbital foramen more concave (more nearly straight in pallida); maxillary arm of zygoma less deeply notched at antorbital foramen as viewed from above; audital bullae small and angular and dentition about as in pallida. Compared with that of O. z. mergens the skull is much smaller, with upper outline rising higher across anterior roots of zygomata and rostrum more depressed anteriorly, as viewed from the side; anterior border of outer wall of antorbital foramen more concave; audital bullae relatively smaller, more angular.

Measurements.—Type: Total length, 485 mm.; tail vertebrae, 205; hind foot, 73. Average of five adult topotypes: 477 (465–492); 195 (187–205); 68 (66–70). Skull (type): Occipitonasal length, 56.4; condylobasal length 56.9; zygomatic breadth, 37.7; interorbital constriction, 6.1; nasals, length, 19.3, greatest width, 9.2; maxillary toothrow (alveoli), 13.7.

Remarks.—The characters distinguishing Ondatra zibethica bernardi from O. z. pallida are rather slight but quite constant as shown by the comparison of the material listed with over 30 topotypes and other typical specimens of pallida. The color differences noted in adults are also exhibited by very young individuals.

Specimens examined.—Total number, 29, as follows:

Arizona: Gadsden (type locality), 19; Colorado River (opposite Needles, Calif.), 1; Topock, 2.

California: Calipatria, 1; Colorado River (15 miles southwest of Ehrenberg, Ariz.), 4.

Lower California: Mexicali (5 miles southeast), 1; Volcano Lake (15 miles south), 1.